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EXAMINER

HAM, SEUNGSOOK

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 11/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/865,146

Applicant(s)

ABE ET AL.

Examiner

Seungsook Ham

Art Unit

2817

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 3-20 is/are pending in the application.
- 4a) Of the above claim(s) 4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3 and 5-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Election/Restrictions***

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 13-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 13-18, "wherein an outermost conductor layer...is greater in thickness than the other conductor layers of the outer conductor" appears to misleading since claims 3, 9-12 do not recite the outer conductor having a multi-layered structure.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hidaka et al. (US '091).

Hidaka et al. (figs. 1A-2) discloses a resonator/columnar element comprising: a dielectric/cylindrical element 1; and a conductor 2 formed on an outer surface of the dielectric element, wherein the conductor has a multi-layer electrode structure in which conductor layers 3a-3d and dielectric layers 4a-4d are alternatively laminated and

wherein an outermost conductor layer 3d is greater in thickness than the other conductor layers (see fig. 2).

Claims 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishikawa et al. (JP '804).

Ishikawa et al. (fig. 33a-d) discloses a resonator/columnar element comprising: a dielectric/cylindrical element (not numbered, the dielectric element between the conductors 71 and 72); and a conductor 72 formed on an outer surface of the dielectric element, wherein the conductor has a multi-layer electrode structure in which conductor layers 1-5 and dielectric layers 30-1, 30-2, 30-3, 30-4 are alternatively laminated and wherein an outermost conductor layer 1 is greater in thickness than the other conductor layers 2-5 (see fig. 33(c)).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 5-6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lithgow (US '883) or Isoda (JP '501) in view of Ishikawa et al. (JP '804).

Lithgow (figs. 1-8) discloses a coaxial resonator comprising: an inner conductor 14 formed on an outer surface of a columnar element 12, a dielectric element 18 having a hole formed therein, the columnar element being disposed in the hole, and an outer conductor 24 formed on an outer surface of the dielectric element (see abstract).

Isoda (figs. 1(a) , 1(b)) discloses a coaxial resonator comprising: an inner conductor 11 formed on an outer surface of a columnar element 12, a dielectric element 10 having a hole formed therein, the columnar element being disposed in the hole, and an outer conductor 13 formed on an outer surface of the dielectric element (see abstract).

Lithgow and Isoda do not show the inner conductor and/or outer conductor formed by alternately laminating conductor layers and dielectric layers, and an outermost conductor layer has a greater thickness than the other conductor layers in inner conductor and/or outer conductor.

Ishikawa et al. (fig. 33 (c)) discloses a coaxial resonator having inner and outer conductors 71, 72 and a dielectric element disposed therebetween, wherein the inner conductor or/and outer conductor 71, 72 has a multi-layer electrode structure in which conductor layers 1-5 and dielectric layers 30-1, 30-2, 30-3, 30-4 are alternatively laminated and wherein an outermost conductor layer 1 of the inner conductor (or outer conductor) is greater in thickness than the other conductor layers 2-5 of the inner conductor (or outer conductor).

It would have been obvious to one of ordinary skill in the art to provide the multi-layered electrode structure of inner conductor and/or outer conductor of Ishikawa et al. in the device of Lithgow or Isoda to reduce conduction loss in a transmission line as taught by Ishikawa et al. (see WEST abstract).

Regarding claim 6, it is inherent from the device of Ishikawa since it discloses the film thickness of conductor layers are in phase (see WEST abstract).

Claims 8-12 and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lithgow (US '883) or Isoda (JP '501) in view of Ishikawa et al. (JP '804) as applied to claim 3 above, and further in view of Tada et al. (US '707).

The modified device of Lithgow or Isoda does not show providing the coaxial resonator in a duplexer by providing a plurality of coaxial resonators. However, using a plurality of coaxial resonators in a duplexer is well known in the art.

Tada et al. (figs. 1-6) discloses a conventional duplexer having a transmission filter and a reception filter disposed in a dielectric block having a plurality of coaxial resonators.

It would have been obvious to one of ordinary skill in the art to use the modified coaxial resonator of Lithgow or Isoda in a duplexer since such design technique is well known in the art as shown by Toda et al. and it also requires only a routine skill in the art.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lithgow (US '883) or Isoda (JP '501) in view of Ishikawa et al. (JP '804) as applied to claim 3 above, and further in view of Fukazawa (JP '448).

The modified device of Lithgow or Isoda is silent as to whether a non-conducting element can be disposed between the columnar element and the dielectric element. However, such coaxial resonator structure is well known in the art. Fukazawa (figs. 1, 2 and 5) discloses a coaxial resonator having a non-conducting element 9 (i.e., a gap) disposed between a columnar element (i.e., a rod) and a dielectric element 2. Therefore, it would have been obvious to one of ordinary skill in the art to provide a non-

conducting element between the columnar element and the dielectric element in the modified device of Lithgow or Isoda since such design technique is well known in the art and does not alter the resonator characteristic.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 3, and 5-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-12 of copending Application No. 09/707,264 in view of Lithgow (US '883) or Isoda (JP '501).

The instant claims are same except the inner conductor is disposed on a columnar element. Lithgow and Isoda disclose a coaxial resonator having an inner conductor provided on an outer surface of a columnar element and disposed in a dielectric element hole. It would have been obvious to one of ordinary skill in the art to provide the inner conductor on a columnar element and disposed in a dielectric element hole in the device of copending claims for easy assembling as taught by Lithgow or Isoda (see abstract).

This is a provisional obviousness-type double patenting rejection.

Claims 3 and 5-12 are provisionally rejected under 35 U.S.C. 103(a) as being obvious over copending Application No. 09/707,264 which has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the copending application, it would constitute prior art under 35 U.S.C. 102(e) if published or patented. This provisional rejection under 35 U.S.C. 103(a) is based upon a presumption of future publication or patenting of the conflicting application.

The same reasoning is applied as the obviousness-type doubling patenting rejection above.

This provisional rejection might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the copending application was derived from the inventor of this application and is thus not the invention "by another," or by a showing of a date of invention for the instant application prior to the effective U.S. filing date of the copending application under 37 CFR 1.131. For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(I)(1) and § 706.02(I)(2).

#### ***Response to Arguments***

Applicant's arguments filed on 10/15/02 have been fully considered but they are not persuasive.



Regarding the obviousness-type double patenting, the applicant did not submit a terminal disclaimer, thus, this rejection is still stand.

Applicant's arguments with respect to claims 3 and 5-20 have been considered but are moot in view of the new ground(s) of rejection.

**Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seungsook Ham whose telephone number is (703) 308-4090. The examiner can normally be reached on Monday - Thursday from 8:00 A.M. to 5:00 P.M..

Art Unit: 2817

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on (703)308-4909. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

A handwritten signature in black ink, appearing to be 'Seungsoek Ham', written in a cursive style.

Seungsoek Ham  
Primary Examiner  
Art Unit 2817

sh  
November 21, 2002